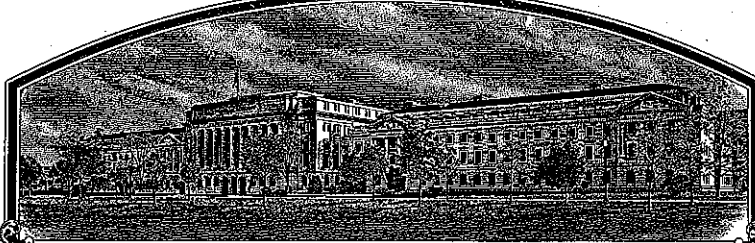


No.

200400132



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME;

Pickseed West, Inc. & Rutgers, The State
University of New Jersey.

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC DEPOSITMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE APPLICANT(S) TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BLUEGRASS, KENTUCKY

'Mercury'

In Testimony Whereof, I have hereunto set my hand
and caused the seal of the Plant Variety
Protection Office to be affixed at the City of
Washington, D.C. this seventeenth day of
February, in the year two thousand and nine.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

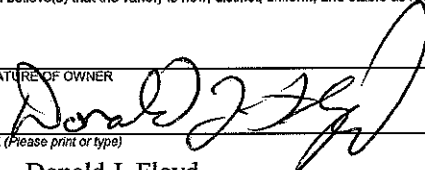
Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Pickseed West, Inc. & Rutgers, The State University of New Jersey		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME Pick 232 or H94-232		3. VARIETY NAME Mercury	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 30190 Hwy 34 SW Cook College Albany, OR 97321 88 Lipman Dr. New Brunswick, NJ 08901-8525		5. TELEPHONE (include area code) 541-967-0123		FOR OFFICIAL USE ONLY VPPO NUMBER #200400132 FILING DATE 3/1/2004	
		6. FAX (include area code) 541-967-6103			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) corporation & public university		8. IF INCORPORATED, GIVE STATE OF INCORPORATION Oregon		9. DATE OF INCORPORATION 1968	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)					
Donald J. Floyd c/o Pickseed West, Inc 30190 Hwy 34 SW Albany, OR 97321		William A. Meyer Adelphia Research Center 594 Halls Mill Rd. Freehold, N.J. 07728		FILING AND EXAMINATION FEES: \$ 3,652.00 DATE 3/1/2004 CERTIFICATION FEE: \$ 768.00 DATE 1/12/2009	
11. TELEPHONE (include area code) 541-967-0123		12. FAX (include area code) 541-967-6103		13. E-MAIL dfloyd@Pickseed.com	
14. CROP KIND (Common Name) Kentucky bluegrass		16. FAMILY NAME (Botanical) Poaceae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Poa pratensis		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)					
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety					
b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness					
c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety					
d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional)					
e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership					
f. <input type="checkbox"/> Exhibit F. Declaration Regarding Deposit					
g. <input checked="" type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)					
h. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)					
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(e) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23) <input type="checkbox"/> UNDECIDED					
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED					
22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)					
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)					
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)					

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER 	
NAME (Please print or type) Donald J. Floyd		NAME (Please print or type) Donald J. Floyd	
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
		Director of Research	2-27-04

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

First date of sale - December 18, 2003, USA

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed/lis-sd.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, S.W., Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete.

Mercury
Kentucky Bluegrass
Origin and Breeding History

Mercury (Pick 232, H94-232) Kentucky bluegrass (*Poa pratensis* L.) appears to have originated as a single, apomictic plant selected from the open-pollinated progeny of C-74. The line C-74 is a vigorous, apomictic line that originated from a plant collected from an old turf area in Exeter, RI in 1987. This is similar in appearance and performance to *Unique* Kentucky bluegrass (1).

A plant of C-74 was open pollinated by typical plants of *Princeton P-105* (2) and *Rita* as well as plants collected from the Mid-Atlantic region, Delaware, Maryland, New Jersey and Pennsylvania. Four plants of *Poa ampla* and *P. ampla* x *P. pratensis* were also included in the open-pollinated crossing block, which consisted of a total of 153 plants, during late winter of 1991-1992 in a greenhouse located on the Cook College campus of Rutgers University. Environmental conditions prior to and during pollination were modified to increase sexual reproduction of facultative apomictic Kentucky bluegrasses (3,4,5). Seed from the C-74 female parent was harvested in the spring of 1992. Seedlings were grown in the greenhouse in the winter of 1992-1993 and hybrids were phenotypically identified. Selections were made from the flats for those plants having a growth habit distinctly different from the maternal plant C-74. Many were more aggressive with wider leaves than C-74. Selected hybrid plants were established in a spaced-plant nursery at Rutgers University Plant Science research and Extension Farm at Adelphia, NJ, during the spring of 1993. The following summer, an attractive F₁ hybrid plant was harvested on June 20 and yielded 43 grams. This was an early maturing, higher yielding plant compared to C-74. It also exhibited larger seed size than C-74. In the fall of 1994, it was planted in a turf plot at North Brunswick, NJ with the designation H94-232. A small quantity of pre-breeder seed of H94-232 was produced at New Brunswick, NJ, and sent to Pickseed West, Inc. (PSW), Albany, OR in late summer 2000. The first quantity of breeder seed was produced there in 2001, from a spaced planted nursery of approximately 1,000 plants. Plants within this nursery appeared to be 95% apomictic. The variety has appeared very uniform and stable for growth habit in approximately six subsequent seed production years beyond breeder seed production. Variant plants outside the mean of the variety for plant type and growth habit have not been observed as a complication to seed multiplication.

Mercury has good floret fertility and a seed head rating of 7 based on a 1-9 scale (9 = most seed heads). ***Mercury*** has above average turf quality, good winter color, and excellent stripe smut resistance.

References

1. Rose-Fricker, C.A., M.L. Fraser, W.A. Meyer, and C.R. Skogley. 1999. Registration of *Unique* Kentucky bluegrass. *Crop Sci.* 39:290.
2. Hurley, R.H., V.G. Lehman, R.F. Bara, and C.R. Funk. 2000. Registration of *Princeton P-105* Kentucky bluegrass. *Crop Sci.* 40:1494.
3. Bashaw, E.C., and C.R. Funk. 1987. Apomictic grasses. p. 40-82. *In* F. Lemaire (ed.) *Proc. Int. Turfgrass Res. Conf.*, 5th, Avignon, France. INRA Publ., Versailles.
4. Hintzen, J.J., and A.J.P. van Wijk. 1985. Ecotype breeding and hybridization in Kentucky bluegrass (*Poa pratensis* L.). p.213-219. *In* F. Lemaire (ed.) *Proc. Int. Turfgrass Res. Conf.*, 5th, Avignon, France. INRA Publ., Versailles.
5. Pepin, G.W., and C.R. Funk. 1971. Intraspecific hybridization as a method of breeding Kentucky bluegrass for turf. *Crop Sci.* 11:445-448.

#200400132

Exhibit B
Statement of Varietal Distinctness
***Mercury* Kentucky bluegrass**

Mercury Kentucky bluegrass is a new cultivar. *Mercury* is most similar to the cultivar *Moonshadow*. The two cultivars can be distinguished based on differences in the characteristics of reproductive heading date and flag leaf sheath length. *Mercury* has an average heading date of April 21 in western Oregon, and *Moonshadow* has an average heading of May 14 (Table 1). *Mercury* has an average flag leaf sheath length of 12.1 cm while the sheath of *Moonshadow* has averaged 10.6 cm (Table 2).

#200400132

Table 1. Reproductive heading dates of Kentucky bluegrass cultivars for two growing seasons in western Oregon.†

Cultivar	Heading Date	
	2002	2003
Mercury	April 24	April 17
Rampart	April 29	April 30
Moonshadow	May 17	May 9
Touchdown	April 15	April 17
Julia	April 22	April 28
Langara	April 28	April 24
Adelphia	May 6	April 26
Baron	April 28	April 26
Ram I	May 1	May 1
America	May 5	May 3
Midnight	May 6	May 16
LSD@0.05	3 days	5 days

† Measurements taken from plants of each cultivar spaced planted in a nursery in October 2001 at the research facility of Pickseed West, Inc., Albany, OR.

#200400132

Table 2. Flag leaf sheath length of Kentucky bluegrass cultivars for two growing seasons in western Oregon.†

Cultivar	Sheath length (cm)	
	2002	2003
Mercury	11.2	13.0
Rampart	11.1	12.8
Moonshadow	9.6	11.6
Touchdown	12.9	16.4
Julia	11.7	14.3
Langara	10.5	14.1
Adelphia	10.7	13.4
Baron	11.1	13.4
Ram I	10.5	12.3
America	10.0	11.6
Midnight	10.7	11.4
LSD@0.05	1.3	1.2

† Measurements taken from plants of each cultivar spaced planted in a nursery in October 2001 at the research facility of Pickseed West, Inc., Albany, OR.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY PROGRAM
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**EXHIBIT C
(BLUEGRASS)**

**OBJECTIVE DESCRIPTION OF VARIETY
BLUEGRASS
(*Poa* spp.)**

NAME OF APPLICANT(S) Pickseed West, Inc. & Rutgers, The State University of New Jersey (81:10/6/08)	TEMPORARY DESIGNATION Pick 232	VARIETY NAME Mercury
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) 30190 Hwy 34 SW Cook College Albany, OR 97321 88 Lipman Dr. New Brunswick, NJ 08901-8525	FOR OFFICIAL USE ONLY PVPO NUMBER #200400132	

Select the number which characterizes the variety in the features described below. For measured characteristics use leading zeros as necessary in order to fill all blanks (e.g. 089). Those characteristics marked with a star * are preferred to be recorded. Any others should be recorded to help establish novelty or uniqueness. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate the system used: 1-9 subjective turf scale. Describe location of test area, conditions, and number of plants used: Morphological descriptors measured from spaced plants in 2002, Albany, OR (unless noted otherwise). Turf trial data taken from NTEP, 2001.

1. SPECIES:

☒ 1 = *Poa compressa* ☐ 2 = *P. pratensis* ☐ 3 = *P. trivialis* ☐ 4 = Others (Please Specify): _____

☐ ☐ ☐ Chromosome Number

2. ADAPTATION: (0 = Not Tested, 1 = Not Adapted, 2 = Adapted, 3 = Well Adapted)

☒ Northeast ☐ Transitional Zone ☐ Southeast ☒ North Central

☒ Pacific N.W. ☐ Intermountain ☐ Southwest (CA, AZ) ☐ Other (Please Specify): _____

3. MATURITY (At first anthesis): Give test area Albany, OR

☒ 1 = Very Early 2 = Early (Delta, Mystic) 3 = Medium Early (Fylking, Nugget)
4 = Medium late (Newport, Adelphi, Aquila) 5 = Late (Merion, Baron, Enmundi)
6 = Very Late (Pacific)

_____ Date of First Anthesis

<input checked="" type="checkbox"/> 07 Number of days earlier than <input checked="" type="checkbox"/> 10 <input type="checkbox"/> 08 Maturity same as <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 09 Number of days later than <input checked="" type="checkbox"/> 1	1 = Nugget 2 = Frylking 3 = Delta 4 = Merion 5 = Newport 6 = Baron 7 = Mystic 8 = Sabre 9 = Reubens 10 = America 11 = Touchdown 12 = Julia
--	---

4. PLANT HEIGHT (At maturity-Average of longest shoot of 10 plants from soil surface to top of panicle): Test Area Albany, OR

★ ☐ 3

1 = Short

3 = Medium tall (Merion, Adelphi)

2 = Medium short (Baron, Fylking, Mystic)

4 = Tall (delta)

5 = Very tall

★ ☐ 0 ☐ 5 ☐ 5 cm Height

☐ 0 ☐ 9

cm Shorter than

Height same as

☐ 1 ☐ 2

cm Taller than

★ ☐ 1 ☐ 2

★ ☐ 6

★ ☐ 10

10=America

#200400132

1 = Nugget

2 = Frylking

3 = Delta

4 = Merion

5 = Newport

6 = Baron

7 = Mystic

8 = Sabre

9 = Reubens

11=Touchdown

12=Julia

5. GROWTH HABIT:

★ ☐ 1

Habit: 1 = Prostrate (Nugget)

2 = Semiprostrate (Merion)

3 = Erect (Delta)

☐ ☐ ☐

cm Amount of spread by rhizomes in 1 year (give test area _____)

6. LEAF BLADE:

★ ☐ 3

Green color:

1 = Light green (Mystic)

3 = Moderately dk. green (Merion, Adelphi)

2 = Medium green (Fylking, Bonnieblue)

4 = Very dk. green (Nugget, Glade, Enmundi)

★ ☐ 0

Bluegreen color:

1 = Not bluegreen (Mystic, Touchdown, Parade)

3 = Bluegreen (Nugget, Enmundi, Adelphi)

2 = Moderately bluegreen (Merion, A-34)

4 = Strongly bluegreen (Majestic)

☐ 2

Winter color:

1 = Light green

2 = Dark green

3 = Light purple

4 = Dark purple

5 = Not purple

6 = Not green or purple

★ ☐ 1

Hairs upper side:

1 = Absent (Nugget)

2 = Sparse (Merion)

3 = Dense (Park)

☐ 1

Hairs lower side:

1 = Absent (Fylking, Merion)

2 = Sparse

3 = Dense (Nugget)

☐ 2

Luster upper side:

1 = Shiny (Eclipse, Enmundi)

2 = Dull (Aquila, Parade)

☐ 1

Luster lower side:

1 = Shiny (Mystic, Enmundi)

2 = Dull (Barbie, Eclipse)

★ ☐ 2

Margin hairs

1 = Absent (Delta)

2 = Present (Fylking, Merion)

(Fringe on Margin or Base):

★ ☐ 3

Width:

1 = Very fine (Mystic)

2 = Fine (Nugget)

3 = Medium (Merion, Fylking)

4 = Broad (Adelphi, Baron)

5 = Very broad (Monopoly)

☐ 3 ☐ 5

mm Width (flag leaf)

☐ 0 ☐ 5

mm Narrower than

Width same as

☐ 0 ☐ 8

mm Wider than

☐ 0 ☐ 6 ☐ 7

mm Length (flag leaf)

☐ 0 ☐ 4

mm Shorter than

Length same as

☐ 3 ☐ 8

mm Longer than

★ ☐ 6

★ ☐ 11

★ ☐ 10

10=America

11=Touchdown

12=Julia

1 = Nugget

2 = Frylking

3 = Delta

4 = Merion

5 = Newport

6 = Baron

7 = Mystic

8 = Sabre

9 = Reubens

1 = Nugget

2 = Frylking

3 = Delta

4 = Merion

5 = Newport

6 = Baron

7 = Mystic

8 = Sabre

9 = Reubens

10=America

11=Touchdown

12=Julia

☐ 2

Position of flag leaf (angle to stem):

1 = Appressed

2 = Open angle, yet stiff

3 = Nodding

7. LEAF SHEATH:

1 mm sheath length

#200400132

- ★ ☐ 1 Seedling Color (base of sheath): 1 = Green (Nugget, Merion) 2 = Red (Delta)
- ★ ☐ 2 Hairs on Margin: 1 = Absent (Fylking) 2 = Present (Nugget)
- ★ ☐ 1 Margin Roughness (to touch): 1 = Smooth (Delta) 2 = Rough (Sabre)
- ☐ 1 Hairs on Surface: 1 = Absent () 2 = Present (Nugget)
- ☐ 1 Surface Roughness (to touch): 1 = Smooth (Fylking) 2 = Rough (Ram I)
- ☐ 1 Hairs on both sides just beneath leaf blade (under collar): 1 = Absent (Merion) 2 = Present (Nugget)
- ★ ☐ Hairs on ligule: 1 = Absent (Fylking) 2 = Short (Baron) 3 = Long (Nugget)
- ☐ Glaucoity: 1 = Absent (Mystic, Enmundi) 2 = Present (Birka)
- ☐ 2 Keel: 1 = Absent (Ram I) 2 = Present (Adelphi)

8. PANICLE (Mature Plant):

- mm Length (Lowest branch whorl to top, for 10 plants) Test Area: Albany, OR
- mm Shorter than ★ ☐ 1 = Nugget 2 = Frylking 3 = Delta
- Panicle same as ★ ☐ 6 4 = Merion 5 = Newport 6 = Baron
- mm Longer than ★ ☐ 10 7 = Mystic 8 = Sabre 9 = Reubens
- ★ ☐ 1 Color (at 50% flowering): 1 = Not red (Fylking) 10 = America 11 = Touchdown 12 = Julia
2 = Red (Nugget)
- ☐ 1 Shape of Rachis (opposite lower side branches): 1 = No bend (Nugget) 2 = Bend (Merion)
- ★ ☐ 1 Collar: 1 = Opened (Nugget) 2 = Closed (Merion)
- ★ ☐ 2 Branches Attitude (Lowest whorl): 1 = Drooping (America, Prato) 2 = Horizontal (Merion) 3 = Ascending (Tundra)
- ☐ 4 Number of main branches in lowest whorl:
- ★ ☐ 1 Panicle habit: 1 = Nodding (Newport) 2 = Upright (Nugget)
- ★ ☐ 1 Panicle type: 1 = Open 2 = Intermediate 3 = Compact
- ☐ 2 Anther color (anthesis): 1 = Purple 2 = Yellow 3 = Brown

9. LEMMA

- ★ ☐ Keel 1 = Glabrous 2 = Slightly pubescent 3 = Pubescent
- ★ ☐ Marginal Nerves
- ☐ Intermediate Nerves: 1 = Distinct 2 = Obscure
- ☐ Basal Webbing: 1 = Absent 2 = Scant (Baron) 3 = Copious (Merion)

10. SEED: (Floret-not dehulled)

- ★ ☐ 1 Apomixis Percentage: 1 = more than 95 2 = 85 to 95 3 = less than 85

10. SEED (Continued)

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☐ Phenol Reaction: 1 = none-lemma removed (Merion) 2 = Beige (Cougar) 3 = Brown (Windsor)
4 = Black (Mystic -2hrs) 5 = Black (-24hrs)

☐ ☐ ☐ mm Width (average of 10) ☐ ☐ ☐ mm Length (average of 10)

☐ ☐ ☐ ☐ Milligrams per 10,000 seed

1 ☐ ☐ ☐ Milligrams less than

Weight same as

☐ ☐ ☐ Milligrams more than

☐ Weight Class (g per 10,000 seed): 1 = Light (< 3g Sydsport, Merion)

2 = Medium (3g - 4g Adelphi, Parade)

3 = Heavy (> 4g Fylking, Nugget)

1 = Nugget 2 = Frylking 3 = Delta
4 = Merion 5 = Newport 6 = Baron
7 = Mystic 8 = Sabre 9 = Reubens
10 = America 11 = Touchdown
12 = Julia

11. ENVIRONMENTAL RESISTANCE:

(0 = Not Tested; 1 = Very Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Highly Resistant)

☐ Cool Temperature (Winter color) ☐ Cold (injury) ☐ Heat ☐ Drought
☐ Shade ☐ Low Fertility ☐ Acid Soil ☐ Alkalinity
☐ Salinity ☐ Soil Compaction ☐ (< pH 5.5) (pH > 7.5)
☐ Other (Please Specify): Sod stretching ☐ Poor Drainage ☐ Air Pollution

12. DISEASE RESISTANCE:

(0 = Not Tested; 1 = Very Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Highly Resistant)

☐ Melting-Out *Drechslera poae* (*Helminthosporium vagans*) ☐ Sclerotinia *S. borealis*
☐ Helminthosporium Leaf Spot *Bipolaris sorokiniana* ☐ Stem Rust *Puccinia graminis*
☐ Brown Patch *Rhizoctonia solani* ☐ Stripe Rust *P. striiformis*
☐ Powdery Mildew *Erysiphe graminis* ☐ Leaf Rust *P. poae-nemoralis*
☐ Stripe Smut *Ustilago striiformis* ☐ Orange Stripe Rust *P. poarum*
☐ Flag Smut *Urocystis agropyri* ☐ Pythium Blight *Pythium* spp.
☐ Snow Mold *Fusarium nivale* ☐ Red Thread *Corticium fujiforme*
☐ Ergot *Claviceps purpurea* ☐ Other (Please Specify): Microdochium patch
☐ Fusarium Blight *Fusarium roseum*, *F. tricinctum* ☐ Other (Please Specify): Crown rust
☐ Typhula Blight *Typhula* spp.
☐ Dollar Spot *Sclerotinia homoeocarpa*

13. INSECTS, NEMATODES, RESISTANCE:

(0 = Not Tested; 1 = Very Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Highly Resistant)

☐ Chinch Bug *Blissus* spp. (give species: _____)
☐ Sod Webworm *Crambus* spp. (give species: _____)

13. INSECTS, NEMATODES, RESISTANCE (Continued)

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- ☐ Bluegrass Billbug *Sphenophorus parvulus*
- ☐ White Grub: Japanese Beetle, Chafers (give species _____)
- ☐ Greenbug Aphid *Schizaphis graminum*
- ☐ Other (Please Specify): _____
- ☐ Other (Please Specify): _____

14. Give variety or varieties that most closely resemble the application variety. For the following characteristics indicate Degree of Resemblance by placing in the column marked D.R., one of the following numbers: 1 = Application variety is less than comparison variety; 2 = Same as; 3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
Maturity-heading	Julia	2	Leaf Width	Limousine	2
Height	Touchdown	2	Leaf Color Spring	Touchdown	2
Seed Size	Julia	1	Leaf Color Summer	Moonshadow	2
Seed Weight	Julia	2	Leaf Color Winter	Touchdown	2
Cold Injury	Moonshadow	2	Drought	Baron	2
Heat	Julia	2	Disease** Leaf	Limousine	2
Shade	Moonshadow	2	spot		

**Specify each disease evaluated.

15. ADDITIONAL DESCRIPTION

Describe all characteristics and conditions that cannot be adequately described in this form in Exhibit D.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E

STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Pickseed West, Inc. & Rutgers, The State University of New Jersey	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER Pick 232 or H94-232	3. VARIETY NAME Mercury
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 30190 Hwy 34 SW Albany, OR 97321 Cook College 88 Lipman Dr. New Brunswick, NJ 08901-8525	5. TELEPHONE (Include area code) 541-967-0123	6. FAX (Include area code) 541-967-6103
7. PVPO NUMBER # 200400132		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO

Pickseed West, Inc. jointly owns Mercury with Rutgers, The State University of NJ

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 3204N, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-6964 (voice and TDD). USDA is an equal opportunity provider and employer.

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